

## ABSTRACT

A wireless transmission apparatus that can accurately select an optimal modulation scheme on a per block basis in a multi-carrier communication system in which block division of subcarriers and adaptive modulation are performed. In this wireless transmission apparatus, a propagation path characteristics acquisition section (107) acquires the average SNR and SNR dispersion for each block, which are estimated by a wireless reception apparatus (200), using received signals inputted from a reception RF section (106) and outputs these to an assignment section (108), the assignment section (108) selects a modulation scheme for each block based on the average SNR and SNR dispersion of each block inputted from the propagation path characteristics acquisition section (107), and modulation sections (101-1, 101-2, ..., 101-L) modulate multi-carrier signals included in each block, with the modulation scheme for each block selected by the assignment section (108).